

IN THE CLAIMS:

1. (Original) A water-soluble polymer, which has a calcium-ion-binding ability of not less than 470 mgCaCO₃/g and further has a clay dispersibility of not less than 0.90 in a test liquid having a calcium concentration of 50 ppm in terms of calcium carbonate.

2. (Original) A water-soluble polymer, which has a calcium-ion-binding ability of not less than 430 mgCaCO₃/g and further has a clay dispersibility of not less than 0.70 in a test liquid having a calcium concentration of 100 ppm in terms of calcium carbonate.

3. (Currently amended) A water-soluble polymer according to claim 1 ~~or 2~~, which has a weight-average molecular weight of 50,000-8,000.

4. (Currently amended) A water-soluble polymer according to ~~any one of claims 1 to 3~~ claim 1, which is a water-soluble polycarboxylic polymer containing, as an essential structural unit or essential structural units, a structural unit (M) derived from a monoethylenically unsaturated monocarboxylic acid (salt) monomer and/or a structural unit (D) derived from a monoethylenically unsaturated dicarboxylic acid (salt) monomer.

5. (Original) A water-soluble polymer according to claim 4, which has both the structural units (M) and (D), wherein the total content of these two structural units is not lower than 90 weight %, and wherein the mutual molar ratio between them (D/M) is in the range of 35/65 to 65/35.

6. (Original) A water-soluble polymer according to claim 5, wherein the molar ratio (D/M) is in the range of 40/60 to 60/40.

7. (Currently amended) A process for production of a water-soluble polymer, which is a process comprising the step of polymerizing a monomer component to thereby obtain the water-soluble polymer, wherein the monomer component essentially includes a monoethylenically unsaturated monocarboxylic acid (salt) monomer (m) and/or a monoethylenically unsaturated dicarboxylic acid (salt) monomer (d);

~~with the process being characterized in that~~ wherein:

the polymerization is carried out with at least two polymerization initiators essentially including hydrogen peroxide, and the reaction temperature in this polymerization is set in the range of 99-80 °C.

8. (Currently amended) A process for production of a water-soluble polymer, which is a process comprising the step of polymerizing a monomer component to thereby obtain the water-soluble polymer, wherein the monomer component essentially includes a monoethylenically unsaturated monocarboxylic acid (salt) monomer (m) and/or a monoethylenically unsaturated dicarboxylic acid (salt) monomer (d);

~~with the process being characterized in that~~ wherein:

the molar ratio between the monomers (m) and (d) (d/m) is in the range of 35/65 to 65/35;

the polymerization is carried out with at least two polymerization initiators essentially including hydrogen peroxide, and the monomer (d) charged before addition of the polymerization initiators has a neutralization degree of 70 to 95 mol %; and

the weight ratio between hydrogen peroxide and the other initiators (hydrogen peroxide/other initiators) in the polymerization initiators in the polymerization is set at not

less than 1.80, and/or the rate of the other initiators being added is set at not more than 1.40 g/mol·h.

9. (Currently amended) A process for production of a water-soluble polymer, which is a process comprising the step of polymerizing a monomer component to thereby obtain the water-soluble polymer, wherein the monomer component essentially includes a monoethylenically unsaturated monocarboxylic acid (salt) monomer (m) and/or a monoethylenically unsaturated dicarboxylic acid (salt) monomer (d);
~~with the process being characterized in that~~ wherein:

the molar ratio between the monomers (m) and (d) (d/m) is in the range of 35/65 to 65/35;

the polymerization is carried out with at least two polymerization initiators essentially including hydrogen peroxide, and the monomer (d) charged before addition of the polymerization initiators has a neutralization degree of not less than 90 mol%; and

the weight ratio between hydrogen peroxide and the other initiators (hydrogen peroxide/other initiators) in the polymerization initiators in the polymerization is set in the range of 0.4 to 1.1.

10. (Original) A detergent composition, which comprises, as an essential component, the water-soluble polymer as recited in any one of claims 1 to 6.

11. (Original) A dispersant, which comprises, as an essential component, the water-soluble polymer as recited in any one of claims 1 to 6.

12. (Original) A water-treating agent, which comprises, as an essential component, the water-soluble polymer as recited in any one of claims 1 to 6.

13. (New) A water-soluble polymer according to claim 2, which has a weight-average molecular weight of 50,000-8,000.

14. (New) A water-soluble polymer according to claim 2, which is a water-soluble polycarboxylic polymer containing, as an essential structural unit or essential structural units, a structural unit (M) derived from a monoethylenically unsaturated monocarboxylic acid (salt) monomer and/or a structural unit (D) derived from a monoethylenically unsaturated dicarboxylic acid (salt) monomer.

15. (New) A water-soluble polymer according to claim 3, which is a water-soluble polycarboxylic polymer containing, as an essential structural unit or essential structural units, a structural unit (M) derived from a monoethylenically unsaturated monocarboxylic acid (salt) monomer and/or a structural unit (D) derived from a monoethylenically unsaturated dicarboxylic acid (salt) monomer.

16. (New) A water-soluble polymer according to claim 13, which is a water-soluble polycarboxylic polymer containing, as an essential structural unit or essential structural units, a structural unit (M) derived from a monoethylenically unsaturated monocarboxylic acid (salt) monomer and/or a structural unit (D) derived from a monoethylenically unsaturated dicarboxylic acid (salt) monomer.

17. (New) A water-soluble polymer according to claim 14, which has both the structural units (M) and (D), wherein the total content of these two structural units is not lower than 90 weight %, and wherein the mutual molar ratio between them (D/M) is in the range of 35/65 to 65/35.

18. (New) A water-soluble polymer according to claim 15, which has both the structural units (M) and (D), wherein the total content of these two structural units is not lower than 90 weight %, and wherein the mutual molar ratio between them (D/M) is in the range of 35/65 to 65/35.

19. (New) A water-soluble polymer according to claim 16, which has both the structural units (M) and (D), wherein the total content of these two structural units is not lower than 90 weight %, and wherein the mutual molar ratio between them (D/M) is in the range of 35/65 to 65/35.

20. (New) A water-soluble polymer according to claim 17, wherein the molar ratio (D/M) is in the range of 40/60 to 60/40.

21. (New) A water-soluble polymer according to claim 18, wherein the molar ratio (D/M) is in the range of 40/60 to 60/40.

22. (New) A water-soluble polymer according to claim 19, wherein the molar ratio (D/M) is in the range of 40/60 to 60/40.

23. (New) A detergent composition, which comprises, as an essential component, the water-soluble polymer as recited in any one of claims 13 to 22.

24. (New) A dispersant, which comprises, as an essential component, the water-soluble polymer as recited in any one of claims 13 to 22.

25. (New) A water-treating agent, which comprises, as an essential component, the water-soluble polymer as recited in any one of claims 13 to 22.